



**Electro-Voice®**

a MARK IV company

## Model RE98 Miniature Electret Condenser Omnidirectional Microphone

### SPECIFICATIONS

#### Element:

Electret condenser

#### Frequency Response (see Figure 2):

80-15,000 Hz

#### Impedance:

150 ohms nominal (balanced)

#### Polar Pattern:

Omnidirectional

#### Output Level:

-45 dB rel  
(0 dB = 1mW/10 dynes/cm<sup>2</sup>)  
4.36 mV/Pascal @ 1 kHz

#### S/N Ratio:

72 dB A weighted

#### Dynamic Range:

117 dB  
(141 dB input-open circuit)

#### Equivalent Noise Level:

Less than 24 dB re  
.0002 dyne/cm<sup>2</sup>

#### Maximum SPL at 1% THD:

141 dB (SPL) at 1 kHz

#### Operating Voltage:

9 Vdc internal "transistor radio"  
battery (Not supplied. See  
Replacement Guide.)  
18-50 V dc phantom power

#### Current Required:

3.9 mA maximum

#### Output Cable:

10-feet (3-meters), two-conductor,  
shielded, black, rubber-jacketed,  
with A3M connector

#### Case Material, Mike Capsule:

Brass

#### Electronic Housing:

Aluminum

#### Power-Supply/Buffer:

Black ABS plastic with RFI shielding

#### Connections:

See Figure 3

#### Dimensions:

See Figure 1

#### Finish,

Mike Capsule/Electronic Housing  
Assembly:

Non-reflecting black

#### Power-Supply/Buffer Assembly:

Non-reflecting black

#### Weight,

Mike Capsule/Electronic Housing:  
19 grams

#### Furnished Accessories:

385 windscreens  
Belt clip  
Storage pouch  
Tie clasp (EV no. 72099)

#### Optional Accessories:

370 barrier adapter plate  
390 dual tie clasp  
AC24M power supply

### DESCRIPTION AND APPLICATIONS

The model RE98 is a miniature, omnidirectional, electret lavalier microphone designed specifically for the broadcast industry and sound reinforcement. The frequency response of the microphone is tailored to provide a full-range, well-balanced sound character with ultralow distortion for clean and accurate sound reproduction (see Figure 2). The RE98 is designed to be attached to the performer's clothing using the supplied tie clasp or the optional 390 dual tie clasp with the electronics module clipped to the user's belt.

The RE98 does not have the limited dynamic range typical of electret lavalier microphones powered by low-voltage batteries. The RE98 is typically 10-dB greater in sensitivity than conventional electret lavaliers and will accept 20-dB greater input SPL before overload. Due to superior signal-to-noise ratio and headroom, the RE98 can be used in recording and sound reinforcement applications where other miniature tie-clasp electrets would fail. These applications would include, for example, stereo spaced-omni recording, binaural recording, and close miking of instruments. The RE98's diminutive size is ideal for applications on television talk shows, news shows, interviews, and sound reinforcement where, in on-camera use, an unobtrusive microphone is mandatory. The RE98 may also be employed in wall or floor-mounted recording, where the microphone receives the advantages resulting from barrier reinforcement.





To operate the RE98 by the simplest method, internal battery power, first insert a

small coin into the battery-cover slot on the electronics module and pry the protective cover open. Next, attach a fresh 9-volt battery into the battery connector then insert the battery and connector into the exposed compartment (see Battery Replacement Guide). Finally, close the protective cover. Plug the RE98's A3M output cable connector into a microphone mixer input, then slide the switch on the top of the RE98 electronics module to the "ON" position. The RE98 is now operational. If the microphone does not operate, first check the battery voltage, then the battery contacts.

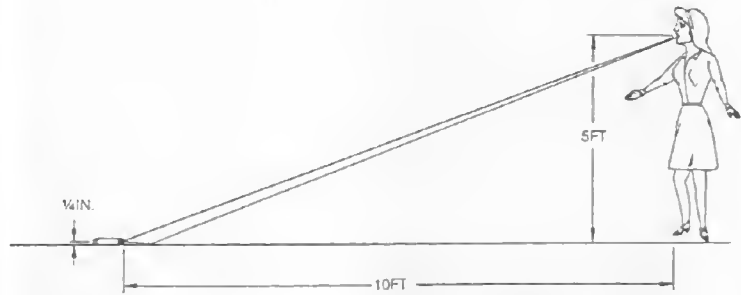
To operate the RE98 by phantom power, plug the RE98's A3M output cable connector into a microphone mixer input providing phantom power. The mixer must provide 18-to-50 volts dc at 3.9 mA to the microphone. Slide the switch on the top of the RE98 electronics module to the "ON" position. The RE98 is now operational with phantom power. If the microphone does not operate, check the connecting cables and if the phantom power supply is indeed turned on. If the microphone still fails to function, insert a 9-volt battery as previously described into the RE98. If the microphone operates, the problem lies with either the microphone cables or the phantom power supply.

#### ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

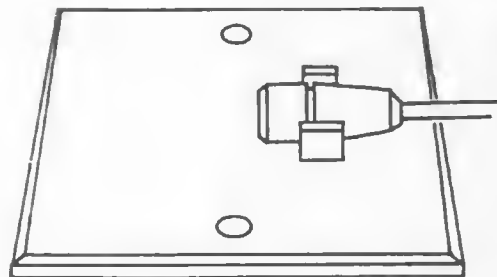
The microphone shall be an omnidirectional, electret condenser type with wide-range response uniform from 80-15,000 Hz. Output level shall be 4.36 mv/Pascal at 1.0 kHz. The output impedance shall be a nominal 150 ohms.

The microphone element shall be made of brass and aluminum. The microphone element shall have a maximum diameter of 0.425 in. (10.8 mm) with a length of 0.86 in. (21.8 mm). The color shall be non-reflective black. The black, undetachable, flexible, miniature cable from the microphone element to the electronics module shall be 6-foot (1.8-meters) long.

The electronics module shall be made of ABS plastic with internal sprayed r.f. shielding. The module shall have a maximum length of 3.10 in. (78.7 mm), a maximum width of 2.50 in. (63.5 mm) and a maximum depth of 0.94 in. (23.9 mm). The color shall be a non-reflecting black. Included within the module shall be a high-pass, 12-dB-per-octave active filter with a designed cut-off frequency of 80 Hz and a constant-current power supply which supplies 3.9 mA from either a 9-volt internal battery or 18-to-50-volt external phantom supply. Attached to the module shall be a 10-foot (3-meter), black, two-conductor shielded, broadcast-type, rubber-jacketed cable with Switchcraft A3M connector installed. A 385 windscreen, storage pouch, and tie clasp shall be supplied. The Electro-Voice RE98 is specified.



**FIGURE 4**  
Typical barrier recording placement utilizing RE98 and 370 barrier adapter plate illustrating direct and indirect sound paths.



**FIGURE 5**  
RE98 Transducer Attached to a 370 Barrier Adapter Plate  
Mounting the RE98 on a sonic barrier, such as a floor, wall, or 370 barrier adapter plate, can increase sensitivity by 6-dB and reduces the baneful effect of reflections.

BATTERY REPLACEMENT GUIDE:			
Manufacturer	Alkaline	Mercury	Carbon-Zinc
Mallory	MN1604	TR146X	M1604
Eveready	522	E146X	215
Burgess	2NG	H146X	2U6
NEDA	1604A	1604M	1604

#### WARRANTY (Limited)

Electro-Voice Professional, PL & BK Series Microphones (excluding the Model PL88)\* are guaranteed against malfunction from any cause for a period of two years from date of original purchase. Also, these microphones (excluding the Model PL88)\* are guaranteed without time limit against malfunction in the acoustic system due to defects in workmanship and materials. Any active electronics incorporated in the microphone are guaranteed for three years from date of original purchase for parts and labor against such malfunction. If such malfunction occurs, microphone will be repaired or replaced (at our option) without charge for materials or labor if delivered prepaid to the proper Electro-Voice service facility. Unit will be returned prepaid. Warranty does not extend to finish, appearance items, cables, cable connectors, switches, or malfunction due to abuse or operation under other than specified conditions, nor does it extend to incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so

the above exclusion may not apply to you. Repair by other than Electro-Voice or its authorized warranty service agencies will void this guarantee. A list of authorized warranty service centers is available from Electro-Voice, Inc., 600 Cecil Street, Buchanan, MI 49107 (AC/616-695-6831); Electro-Voice, Inc., 3810 148th Avenue, N.E., Redmond, WA 98052 (AC/206-881-9555) and/or Electro-Voice West, 8234 Doe Avenue, Visalia, CA 93291 (AC/209-651-7777). This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

\* The Model PL88 is guaranteed for two years from date of original purchase against malfunction due to defects in workmanship and materials.

Service and repair address for this product: Electro-Voice, Inc., 600 Cecil Street, Buchanan, Michigan 49107.

Specifications subject to change without notice.



**ELECTRO-VOICE, INC., 600 Cecil Street, Buchanan, Michigan 49107**

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